

### **REMARKS**

Applicant respectfully requests reconsideration. Claims 1-18, 44, 46, 128, and 129 were previously pending in this application. Claims 46 and 129 have been amended. New claims 130-140 have been added. As a result, claims 1-18, 44, 46, 128-140 are pending for examination with claims 1, 44, 46, 128, 129, and 135 being independent claims. No new matter has been added.

#### **Rejections Under 35 U.S.C. §102(b) in view of Meador**

Claims 1-8 under 35 U.S.C. §102(b) stand rejected as being anticipated by U.S. Patent No. 4,946,890 ("Meador").

It is alleged in the office action that Meador discloses polymeric articles comprising polymer molecules meeting the limitations of the presently rejected claims. While apparently conceding that Meador does not explicitly state that any of his materials comprise "particles," the Patent Office, nonetheless, proposes that individual polymer molecules comprising the various materials disclosed by Meador qualify as "particles" within the definition of particles given by the Applicants.

Applicants respectfully disagree. Meador does not appear to disclose or suggest all the limitations of independent claim 1. For example, Meador does not appear to disclose or suggest a polymer comprising a particle, as defined in Applicants' specification, as recited in independent claim 1. Applicants supplement the ordinary meaning of particle in the specification by defining that a "particle" as used in the context of the present invention refers to "an isolated, independent structure, including at least one molecule." (- page 15, lines 11-12, emphasis added) Accordingly, an individual polymer molecule that is not itself in the form of an isolated, independent structure, but rather forms part of a bulk structure or continuum of material, which is not in particulate form, would not be a "particle comprising a polymer," as recited in independent claim 1. Applicants do not see where in Meador there is disclosure or a suggestion that any of the individual polymeric molecules he forms comprise isolated structures, which are independent from a bulk material, or where any of the polymeric bulk materials comprising the polymer are in the form of particles. By contrast, Meador appears to disclose only forming a non-particulate bulk solid, solution and film comprising the polymer molecules,

but not a particle (e.g. see column 13, lines 23; column 14, lines 5-11). Accordingly, withdrawal of the rejection of independent claim 1 on the present basis is respectfully requested.

Claims 2-8 depend from and include all of the limitations of independent claim 1, and, therefore, are patentable in view of Meador for at least the reasons stated above for independent claim 1. Accordingly, withdrawal of the rejection of claims 2-8 on the present basis is also respectfully requested.

Rejections Under 35 U.S.C. §102(b) in view of Swager

Claims 1-18, 44, and 46 stand rejected under 35 U.S.C. §102(b) as being anticipated by WO 99/57222 ("Swager").

Similar to above, the basis for the present basis of rejection relies on the incorrect proposition made in the Office Action that individual polymer molecules that are part of non-particulate structures qualify as "particles" within the definition of particles given by the Applicants. As explained in detail above, this is not the case. As with Meador above, Applicants do not see where in Swager there is any disclosure or suggestion that any of the individual polymeric molecules he forms comprise isolated structures, which are independent from a bulk material, or where any of the polymeric bulk materials comprising the polymer are in the form of particles. Swager appears to disclose the formation of films comprising the disclosed polymers (page 2, lines 25-26), but does not appear to disclose or suggest particles comprising the polymers. Accordingly, Swager cannot anticipate any of the presently rejected independent claims, each of which recite a particle comprising a polymer, and withdrawal of the present basis of rejection of these claims, and the claims which depend therefrom, is respectfully requested.

Rejections Under 35 U.S.C. §102(e) in view of Chen

The claims 128 and 129 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,589,731 ("Chen"). The Office Action states that Chen discloses a luminescent polymer "sensitive to binding by nucleic acids." The Office Action alleges that this disclosure anticipates all of the limitations of claims 128 and 129.

To begin, Applicants do not concede that Chen is properly prior art to the Applicant's claimed inventions. Applicants reserve the right to establish an invention date for the claimed

invention that is on or before the effective 35 U.S.C. §102(e) date of the subject matter of Chen relied on in the Office Action.

Regarding independent claim 128, Applicants do not find in Chen any disclosure or suggestion that a particle, or anything else for that matter, comprising both a nucleic acid and a luminescent polymer is formed. To the contrary, in Chen, upon exposure to an analyte, such as a nucleic acid, a recognition element attached to a luminescent polymer detaches and dissociates from the polymer. In fact, the technique of Chen relies on this very dissociation to achieve its intended sensing function. For example, Chen discloses that “a strong fluorescent signal is obtained upon separation of a bound biological recognition element, tethered element, and property-altering element combination from a polymer through a greater affinity of a biological agent for the biological recognition element” (column 2, lines 56-61, emphasis added). In other words, upon exposure of a biological agent, such as a nucleic acid, to the recognition unit, the recognition unit separates from the polymer and binds to the biological agent. Accordingly, Chen does not anticipate claim 128 and withdrawal of this rejection of claim 128 is respectfully requested.

For the same reason, Chen also does not appear to disclose or suggest that his methods allow a nucleic acid to become attached to a luminescent polymer, as recited in claim 129 as amended. Therefore, withdrawal of this rejection of claim 129 is also respectfully requested.

#### New Claims

New claim 130 depends from independent claim 46 and recites subject previously recited in claim 46 prior to the present amendment thereof.

New claims 131-133 depend, directly or indirectly, from independent claim 128 and recite subject matter disclosed throughout the specification.

New claim 134 depends from independent claim 128 and recites subject matter disclosed on, for example, page 28, lines 26-27, of the specification.

New claims 138-140 depend, directly or indirectly, from independent claim 129 and recite subject matter disclosed throughout the specification.

New claim 135 is in independent form and recites subject matter disclosed on, for example page 35, line 26 to page 26, line 21 of the specification. New claim 135 is believed to be patentable over the references of record because the references of record do not appear to

disclose or suggest an article, comprising: a particle comprising a luminescent polymer, wherein the luminescent polymer comprises a moiety that is able to become attached to a biological, biochemical, and/or chemical molecule so as to form, upon attachment, a particle comprising the luminescent polymer attached to the biological, biochemical, and/or chemical molecule, as recited in new claim 135.

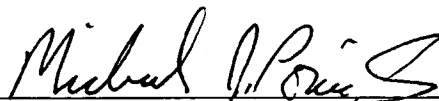
New claims 136 and 137 recite subject matter disclosed on, for example page 28, lines 14-15 and 21-26 of the specification. New claims 136 and 137 depend from new claim 135 and are believed to be patentable over the references of record for at least the same reasons as stated above for new claim 135.

### CONCLUSION

In view of the foregoing amendments and remarks, Applicants believe that this application is in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the undersigned at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,



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